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10/690,382	10/21/2003	Shohachi Miyamae	26.0186 US	6544

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EXAMINER	
YACOB, SISAY	

ART UNIT	PAPER NUMBER
2612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/690,382	Applicant(s) MIYAMAE ET AL.
	Examiner Sisay Yacob	Art Unit 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1 The application of Miyamae et al., "Methods and apparatus for downhole inter-tool communication" filed on October 21, 2003 has been examined.

Claims 1- 48 are pending.

Claim Rejections - 35 USC § 102

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3 Claims 1-6, 12-16, 27, 28, 35-46 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent of Montgomery (5,191,326).

4 As to claim 1, Montgomery discloses a method of communication between wireline downhole tools comprising examining an uplink data stream (Col. 2, lines 44-49; Col. 3, lines 31-56), and extracting any data intended for downhole tools (Col. 2, lines 60-68; Col. 3, lines 6-9).

5 As to claim 2, the method of claim 1, further, Montgomery discloses where a downhole module performs the step of examining the uplink data stream (Col. 3, lines 42-56).

6 As to claim 3, the method of claim 1, further, Montgomery discloses transmitting via a downlink data stream to an intended downhole tool data extracted from the uplink data stream (Col. 3, lines 6-9).

7 As to claim 4, the method of claim 3, further, Montgomery discloses wherein the data intended for downhole tools does not require transmission to the surface before it is sent downhole (Col. 3, lines 6-9).

8 As to claim 5, the method of claim 1, further, Montgomery discloses transmitting any data intended for downhole tools via a downlink data stream to a group of downhole tools (Col. 3, lines 6-9).

9 As to claim 6, the method of claim 1, further, Montgomery discloses broadcasting any data intended for downhole tools via a downlink data stream to all downhole tools (Col. 6, lines 3-8, 25-37).

10 As to claim 12, the method of claim 2, further, Montgomery discloses wherein the downhole module is a downhole telemetry cartridge (Col. 5, lines 53-57; Item 12 of

figure 1) comprising a downhole toolbus controller (Col. 6, lines 30-34, 43-46; Item 12b of figure 1), a downhole device comprising a software enhanced toolbus interface (SEBI) (Col. 6, lines 5-6; Items 12a and c of figure 1), or a downhole device comprising an extended toolbus interface (XBI) (Col. 5, lines 33-36; Items 3a-b of figure 1).

11 As to claim 13, the method of claim 12, further, Montgomery discloses wherein the downhole device is a borehole tool (Col. 2, lines 32-59; Col. 5, lines 30-40; items 2a-b of figure 1).

12 As to claim 14, Montgomery discloses a downhole data acquisition system comprising a surface telemetry system (Col. 2, lines 32-39; Col. 5, lines 39-42; Item 20 of figure 1), a downhole telemetry cartridge comprising a downhole toolbus controller (Items 12, 12b of figure 1), and a plurality of downhole tools (Col. 2, line 37; Col. 5, lines 32-40; Item 20 of figure 1), wherein the downhole toolbus controller is programmed to extract uplink ITC data (Col. 2, lines 60-68; Col. 3, lines 6-9).

13 As to claim 15, the system of claim 14, further, Montgomery discloses wherein the downhole toolbus controller is programmed to copy extracted ITC data to a downlink data stream (Col. 2, lines 60-68; Col. 3, lines 6-9).

14 As to claim 16, the system of claim 15, further, Montgomery discloses wherein the downlink data stream provides the extracted ITC data to one or more of the plurality of downhole tools (Col. 6, lines 3-8, 25-37).

15 As to claim 27, Montgomery discloses a method of communicating between wireline downhole tools comprising examining an uplink data stream with a downhole module (Col. 2, lines 44-49; Col. 3, lines 31-56), extracting any data intended for downhole tools with the downhole module (Col. 2, lines 60-68; Col. 3, lines 6-9), and sending any data extracted to one or more downhole tools via the downhole module (Col. 6, lines 3-8, 25-37).

16 As to claim 28, the method of claim 27, further, Montgomery discloses wherein the data extracted is sent to the one or more downhole tools along a downlink data stream during a subsequent downlink period (Col. 3, lines 6-9).

17 As to claim 35, Montgomery discloses a method of communicating between downhole tools (Col. lines 50-56; Col. 6, lines 35-40) comprising sending a signal from a first downhole tool to a downhole module, relaying the signal from the first downhole tool to a second downhole tool before the signal reaches a surface telemetry module (Col. 6, lines 56-61).

18 As to claim 36, the method of claim 35, further, Montgomery discloses wherein the relaying is done by the downhole module (Col. 3, lines 31-33; Col. 6, lines 3-10).

19 As to claim 37, Montgomery discloses a method of communicating between downhole tools comprising, sending a signal from a first downhole tool, and intercepting the signal at a downhole module before the signal reaches a surface telemetry module (Col. 3, lines 31-33).

20 As to claim 38, the method of claim 37, further, Montgomery discloses wherein the signal is relayed by the downhole module to at least one downhole tool (Col. 6, lines 25-29).

21 As to claim 39, the method of claim 38, further, Montgomery discloses wherein the downhole module is a downhole telemetry cartridge (Col. 5, lines 53-57; Item 12 of figure 1) comprising a downhole toolbus controller (Col. 6, lines 30-34, 43-46; Item 12b of figure 1), a downhole device comprising a software enhanced toolbus interface (SEBI) (Col. 6, lines 5-6; Items 12a and c of figure 1), or a downhole device comprising an extended toolbus interface (XBI) (Col. 5, lines 33-36; Items 3a-b of figure 1).

22 As to claim 40, Montgomery discloses a borehole telemetry system comprising a surface telemetry module (Item 20 of figure 1), a downhole module (Item 12 of figure 1), and a multiplexed data link between the surface module and the downhole module

capable of transferring data alternately between an uplink in which data is transferred from the downhole module to the surface module and a downlink in which data is transferred from the surface module to the downhole module (Col. 2, lines 32-68; Col. 5, lines 30-44; Items 12 and 14 of figure 1), wherein the uplink data can be examined and selectively extracted by the downhole module (Col. 3, lines 6-9).

23 As to claim 41, the system of claim 40, further, Montgomery discloses wherein the downhole module can extract any uplink data intended for downhole tools (Col. 3, lines 6-9).

24 As to claim 42, the system of claim 40, further, Montgomery discloses wherein the downhole module can store and copy any uplink data extracted from the uplink to the downlink (Col. 3, lines 31-33).

25 As to claim 43, the system of claim 42, further, Montgomery discloses wherein any data extracted from the uplink by the downhole module is copied to the downlink at a subsequent downlink period and received by an intended downhole tool (Col. 3, lines 6-9, 31-33; Col. 6, lines 3-8, 25-37).

26 As to claim 44, the system of claim 43, further, Montgomery discloses wherein any data extracted from the uplink by the downhole module is copied to the downlink at

the subsequent downlink period and broadcast to a group of or all downhole tools (Col. 3, lines 6-9, 31-33; Col. 6, lines 3-8, 25-37).

27 As to claim 45, the system of claim 40, further, Montgomery discloses wherein the data link is a wireline cable (Items 10a and 16 o figure1).

28 As to claim 46, the system of claim 45, further, Montgomery discloses wherein the wireline cable extends between a plurality of downhole tools (Col. 2, lines 47-56; See figure 1).

29 As to claim 48, the system of claim 40, further, Montgomery discloses wherein the downhole module is a downhole telemetry cartridge (Col. 5, lines 53-57; Item 12 of figure 1) comprising a downhole toolbus controller (Col. 6, lines 30-34, 43-46; Item 12b of figure 1), a downhole device comprising a software enhanced toolbus interface (SEBI) (Col. 6, lines 5-6; Items 12a and c of figure 1), or a downhole device comprising an extended toolbus interface (XBI) (Col. 5, lines 33-36; Items 3a-b of figure 1).

Rejections - 35 USC § 103

30 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to

a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

31 The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

32 Claims 7, 8, 17-19, 22-26, 29, 30, 32 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomery in view of US patent of Tubel et al., (5,959,547) and further in view of US patent of Endo et al., (6,630,890).

33 As to claim 7, the method of claim 1, further, Montgomery discloses wherein the data intended for downhole tools comprises a command sent from a downhole receiver and intended for a downhole transmitter (Col. 3, lines 5-62), however, Montgomery does not expressly disclose the downhole transmitter and receiver being acoustic transmitter and receiver and acoustic signal being transmitted and received being a firing command signal. In same field of endeavor, Tubel et al., discloses acoustic transmitter and receiver (Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the method of communication between wireline downhole tools of Montgomery, by incorporating the downhole acoustic transmitter and receiver, as

disclosed by Tubel et al., in order to have the data intended for downhole tools comprises a command sent from a downhole acoustic receiver and intended for a downhole acoustic transmitter, because Montgomery discloses the downhole transmitter starts transmitting, and the receiver starts data acquisition in sync with the transmitting of the transmitter following receipt of the command by the transmitter and receiver and Tubel et al., discloses acoustic transmitter and receiver for communication between wireline downhole tools. Also, acoustic transmitter and receiver are well known in the art, however, the combination of Montgomery and Tubel et al., does not expressly disclose the downhole acoustic signal being transmitted and received being a firing signal. In same field of endeavor, Endo et al., discloses the downhole starts firing command being transmitted and received and the receiver starts data acquisition in sync with the firing of the transmitter following receipt of the command (Col. 7, lines 59-67; Col. 8, lines 1-15).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Montgomery and Tubel et al., for method of communication between wireline downhole tool, by incorporating the downhole starts firing command being transmitted and received transmitter, as disclosed by Endo et al., in order to have the data intended for downhole tools comprises a command to fire sent from a downhole acoustic receiver and intended for a downhole acoustic transmitter, because the combination of Montgomery and Tubel et al., disclose the downhole acoustic transmitter starts transmitting, and the acoustic receiver starts data acquisition in sync with the transmitting of the transmitter following receipt of the command by the

transmitter and receiver and Endo et al., discloses the downhole starts firing command being transmitted and received and the receiver starts data acquisition in sync with the firing of the transmitter following receipt of the command.

34 As to claim 8, the method of claim 7, further, Montgomery discloses the downhole transmitter starts transmitting, and the receiver starts data acquisition in sync with the transmitting of the transmitter following receipt of the command by the transmitter and receiver (Col. 3, lines 63-67; Col. 4, lines 1-27).

35 As to claim 17, the system of claim 14, further, Tubel et al., discloses wherein one of the plurality of downhole tools comprises a sonic receiver, and another of the plurality of downhole tools comprises a sonic transmitter (Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42).

36 As to claim 18, the system of claim 16, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose wherein a firing signal is sent from the sonic receiver, extracted from an uplink data stream by the downhole toolbus controller, and sent to the sonic transmitter (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

37 As to claim 19, the system of claim 18, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose wherein the firing signal is also sent to the sonic receiver and the firing of the sonic transmitter and the receiving of the sonic receiver is synchronized by the extracted firing (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

38 As to claim 22, Montgomery discloses a method of acquiring a data comprising sending a signal uphole (Col. 2, lines 44-49, 60-68; Col. 3, lines 31-56), extracting the signal with a downhole module as the signal goes uphole (Col. 3, lines 6-9), copying the signal and sending it downhole to a transmitter, and the tool according to the signal (Col. 6, lines 3-8, 25-37), however, Montgomery does not expressly disclose the data being acoustic and a firing signal. Tubel et al., discloses a method of acquiring acoustic data (Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the method of acquiring a data of Montgomery, by incorporating the method of acquiring acoustic data, as disclosed by Tubel et al., in order to have the method of acquiring acoustic data comprising sending a signal uphole, extracting the signal with a downhole module as the signal goes uphole, copying the signal and sending it downhole to an acoustic transmitter, and the acoustic tool according to the signal, because Montgomery discloses a method of acquiring a data comprising sending a signal uphole, extracting the signal with a downhole module as the signal

goes uphole, copying the signal and sending it downhole to a transmitter and the tool according to the signal and Tubel et al., discloses a method of acquiring acoustic data in wireline downhole tools acoustic transmitter and receiver, however, the combination of Montgomery and Tubel et al., does not expressly disclose the method of acquiring an acoustic data being a firing signal. Endo et al., discloses a method of acquiring a data comprising sending a firing starts command (Col. 7, lines 59-67; Col. 8, lines 1-15).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Montgomery and Tubel et al., for the method of acquiring an acoustic data, by incorporating the method of acquiring a data comprising sending a firing starts command, as disclosed by Endo et al., in order to have a method of acquiring acoustic data comprising sending a firing signal uphole, extracting the firing signal with a downhole module as the firing signal goes uphole, copying the firing signal and sending it downhole to an acoustic transmitter, and firing the acoustic tool according to the firing signal, because the combination of Montgomery and Tubel et al., disclose the method of acquiring acoustic data comprising sending a signal uphole, extracting the signal with a downhole module as the signal goes uphole, copying the signal and sending it downhole to an acoustic transmitter, and the acoustic tool according to the signal and Endo et al., discloses a method of acquiring a data comprising sending a firing starts command.

39 As to claim 23, the method of claim 22, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose synchronizing

acquisition of sonic data with the firing of the acoustic tool using the extracted firing signal (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

40 As to claim 24, the method of claim 22, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose wherein the sending of a firing signal is done by an acoustic receiver (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

41 As to claim 25, the method of claim 22, further, Montgomery discloses extracting a caliper data signal with the downhole module and copying the caliper data signal with high priority to a downlink data stream (Col. 14, lines 3-40).

42 As to claim 26, the method of claim 25, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose the caliper data signal is provided to an acoustic transmitter (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

43 As to claim 29, the method of claim 27, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose wherein the uplink data stream comprises a command to fire sent from a downhole acoustic receiver and intended for a downhole acoustic transmitter (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

44 As to claim 30, the method of claim 29, further, the combination of Montgomery, Tubel et al., and Endo et al., as set forth above in claims disclose synchronizing downhole acoustic transmitter firing and downhole receiver data acquisition based on the command (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

45 As to claim 32, the method of claim 27, however, the combination of Montgomery, Tubel et al., and Endo et al., does not expressly disclose the data intended for downhole tools comprises information transmitted to effect taking a fluid sample, but one ordinary skilled in art would recognize the data intended for downhole tools that comprise information transmitted to effect the downhole tools may be any desired sample inclining taking a fluid sample data sample.

46 As to claim 47, the system of claim 46, further, the combination of Montgomery, Tubel et al., and Endo et al., disclose wherein the plurality of downhole tools comprise two or more of an acoustic receiver, an acoustic transmitter, a caliper, and a sampler (Montgomery, Col. 3, lines 63-67; Col. 4, lines 1-27; Tubel et al., Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42; and Endo et al., Col. 7, lines 59-67; Col. 8, lines 1-15).

47 Claims 9, 10, 20,21, 31, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomery in view of US patent of Patton (5,439,064).

48 As to claims 9 and 31, the method and system of claims 1 and 27, however, Montgomery does not expressly disclose wherein the data intended for downhole tools comprises borehole diameter information transmitted by a caliper. In similar field of endeavor, Patton discloses a data transmitted to downhole tools comprises borehole diameter information calculated and transmitted by controller to downhole tool for controlling the caliper (Col. 12, lines 47-60).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the method of communication between wireline downhole tools of Montgomery of Montgomery, by incorporating the data transmitted to downhole tools comprises borehole diameter information of Patton, in order to have a data intended for downhole tools comprises borehole diameter information transmitted by a caliper, because Montgomery discloses data transmission that are intended for downhole tools

and Patton discloses a data intended for downhole tools comprises borehole diameter information.

49 As to claim 20, the system of claim 14, further, the Patton discloses wherein one of the plurality of downhole tools comprises a caliper (Col. 12, lines 47-60).

50 As to claim 21, the system of claim 20, further, the combination of Montgomery and Patton, as set forth above in claims disclose wherein borehole diameter information is sent from the caliper, extracted from an uplink data stream by the downhole toolbus controller, and sent to the sonic transmitter (Montgomery, Col. 2, lines 60-68; Col. 3, lines 6-9; Col. 12, lines 47-60; Patton Col. 12, lines 47-60).

51 As to claim 33, the method of claim 27, further, Patton discloses wherein the data intended for downhole tools comprises borehole diameter information transmitted to effect movement of a tool or tool string (Col. 12, lines 47-60; Col. 13, lines 1-33).

52 As to claims 10 and 34, the method and system of claims 9 and 33, however, Montgomery in view of Patton does not expressly disclose a downhole module extracts the borehole diameter information from the uplink data stream and copies it to a downlink data stream,

Since Montgomery discloses a downhole module extracting any information intended for downhole tools from the uplink data stream and copies it to a downlink data

stream (Col. 2, lines 60-68; Col. 3, lines 6-9) and Patton discloses a data transmitted to downhole tools comprises borehole diameter information calculated and transmitted by controller to downhole tool for controlling the caliper (Col. 12, lines 47-60). One ordinary skilled in the art would recognize any information intended for downhole tools that a downhole module extracts from the uplink data stream and copies it to a downlink data stream may include the borehole diameter information.

53 Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomery in view of Patton and further in view of Tubel et al.

54 As to claim 11, the method of claim 10, further, as set forth above in claim 10, Montgomery in view of Patton disclose the borehole diameter information is sent to a downhole toll via the downhole module without returning to the surface (Montgomery, Col. 2, lines 60-68; Col. 3, lines 6-9 and Patton, Col. 12, lines 47-60), except, expressly disclosing the downhole tool being a sonic transmitter and Tubel et al., discloses a borehole information being sent to a sonic transmitter via the downhole module without returning to the surface (Col. 10, lines 3-18; Col. 11, lines 46-64; Col. 15, lines 30-42).

One ordinary skilled in the art would recognize any information intended for downhole tools that a downhole module extracts from the uplink data stream and copies it to a downlink data stream may include the borehole diameter information and may be sent to a sonic transmitter via the downhole module without returning to the surface.

Conclusion

55 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following cited arts are further to show the sate of art related to methods and apparatus for downhole inter-tool communication.

In the US Publication (20020179303) Maxit et al., discloses a control system for providing communications signals between components of the system to ensure that each component reliably receives communications intended for it.

In the US Publication (20020020533) Tubel discloses a method and apparatus for the control of oil and gas production wells. More particularly, this invention relates to a method and apparatus for automatically controlling petroleum production wells using downhole computerized control systems.

57 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sisay Yacob

5/12/2006

S. Y.

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